

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An optical disk apparatus which records information regarding copyright on a disk-shaped storage medium by emission of a laser beam, said optical disk apparatus comprising:

a plurality of binary sequence generating means for generating binary sequences corresponding to [[the]] a number of bits of said information regarding copyright, at a transmission rate which is faster than that of said information regarding copyright;

a plurality of operation means for operating said binary sequences with corresponding bits of said information regarding copyright and outputting a plurality of operation results;

selection means for outputting a drive signal by selectively outputting, according to a predetermined switching signal, said plurality of operation results; and

modulation means for modulating said laser beam in accordance with said drive signal.

Claim 2 (Original): An optical disk apparatus according to Claim 1, wherein said binary sequences are M-sequences.

Claim 3 (Original): An optical disk apparatus according to Claim 1, wherein a synchronization pattern is inserted in said drive signal at a predetermined cycle.

Claim 4 (Original): An optical disk apparatus according to Claim 3, wherein said plurality of binary sequence generating means repeatedly output said binary sequences with reference to said synchronization pattern.

Claim 5 (Original): An optical disk apparatus according to Claim 1, wherein said information regarding copyright is recorded in the form of a pit sequence by the emission of said laser beam.

Claim 6 (Currently Amended): An optical disk apparatus according to Claim 1, wherein said plurality of binary sequence generating means repeatedly generate [[the]] same binary sequences at [[the]] a cycle of rotation of said disk-shaped storage medium, at least for a predetermined region of said disk-shaped storage medium;

wherein said plurality of operation means repeatedly multiply [[the]] a same information regarding copyright with said binary sequences to output said plurality of operation results, at least for said predetermined region; and

wherein said selection means selectively output said plurality of operation results so as to form different patterns for the repetition of said binary sequences and/or the repetition of the same information regarding copyright, at least for said predetermined region.

Claim 7 (Original): An optical disk apparatus according to Claim 1, wherein said switching signal is a random number signal.

Claim 8 (Currently Amended): A method of recording on an optical disk, in which information regarding copyright is recorded on a disk-shaped storage medium by emission of a laser beam, the method comprising the steps of:

generating plural lines of signals by respectively scrambling bit sequences of said information regarding copyright with different binary sequences having a transmission rate which is faster than that of said information regarding copyright;

scrambling said plural lines of signals to generate a single line of drive signal; and modulating said laser beam in accordance with said single line of drive signal.

Claim 9 (Canceled).

Claim 10 (Currently Amended): An optical disk ~~according to Claim 9,~~  
comprising:

information regarding copyright, each bit of said information regarding copyright being recorded while being distributed in a circumferential direction of an information recording surface of said optical disk;

wherein said information regarding copyright is recorded by emission of a laser beam which is modulated in accordance with a predetermined drive signal;

wherein said drive signal is a single line of signal which is generated by scrambling a plural lines of operation signals; and

wherein said plural lines of signals are generated by respectively scrambling bit sequences of said information regarding copyright using different binary sequences having a transmission rate which is faster than that of said information regarding copyright.

Claim 11 (Original): An optical disk according to Claim 10, wherein said binary sequences are M-sequences.

Claim 12 (Currently Amended): An optical disk according to Claim 10, wherein information relating to said information regarding copyright is recorded in [[the]] a form of radially extending bar codes.

Claim 13 (Original): An optical disk according to Claim 12, wherein the information relating to said information regarding copyright is unique to each optical disk.

Claim 14 (Original): An optical disk according to Claim 12, wherein the information relating to said information regarding copyright is recorded in a region where said information regarding copyright is recorded.

Claim 15 (Currently Amended): An optical disk apparatus, in which encryption processing is performed using information regarding copyright which is recorded on an optical disk, said optical disk apparatus comprising:

playback signal generating means for emitting a laser beam on said optical disk, receiving returning light, and generating a playback signal in accordance with the returning light;

binary sequence generating means for generating a plurality of binary sequences with reference to a synchronization pattern of said playback signal;

a plurality of sampling means for sampling said playback signal with reference respectively to said binary sequences to thereby output a plurality of sampling results;

a plurality of integration means for respectively integrating said plurality of sampling results to thereby output a plurality of integration results; and

determination means for respectively determining said integration results and decoding corresponding bit sequences of said information regarding copyright.

Claim 16 (Original): An optical disk apparatus according to Claim 15, wherein said binary sequences are M-sequences.

Claim 17 (Original): An optical disk apparatus according to Claim 15, wherein data recorded on said optical disk is decrypted using said information regarding copyright.

Claim 18 (Original): An optical disk apparatus according to Claim 15, wherein desired data is encrypted and recorded on said optical disk using said information regarding copyright.

Claim 19 (New): An optical disk apparatus which records information regarding copyright on a disk-shaped storage medium by emission of a laser beam, said optical disk apparatus comprising:

a plurality of binary sequence generators configured to generate binary sequences corresponding to the number of bits of said information regarding copyright, at a transmission rate which is faster than that of said information regarding copyright;

a plurality of operation units configured to operate said binary sequences with corresponding bits of said information regarding copyright and outputting a plurality of operation results;

a selector configured to output a drive signal by selectively outputting, according to a predetermined switching signal, said plurality of operation results; and  
a modulator configured to modulate said laser beam in accordance with said drive signal.

Claim 20 (New): An optical disk apparatus, in which encryption processing is performed using information regarding copyright which is recorded on an optical disk, said optical disk apparatus comprising:

a playback signal generator configured to emit a laser beam on said optical disk, receiving returning light, and generating a playback signal in accordance with the returning light;

a binary sequence generator configured to generate a plurality of binary sequences with reference to a synchronization pattern of said playback signal;

a plurality of samplers configured to sample said playback signal with reference respectively to said binary sequences to thereby output a plurality of sampling results;

a plurality of integration units configured to respectively integrate said plurality of sampling results to thereby output a plurality of integration results; and

a determination unit configured to respectively determine said integration results and decoding corresponding bit sequences of said information regarding copyright.